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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,138	03/06/2002	Taka-Aki Sato	65823/JPW/PT	8978

7590

06/03/2003

John P. White  
Cooper & Dunham LLP  
1185 Avenue of the Americas  
New York, NY 10036

EXAMINER
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WESSENDORF, TERESA D

ART UNIT	PAPER NUMBER
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1639

DATE MAILED: 06/03/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/092,138

Applicant(s)

SATO, TAKA-AKI

Examiner

T. D. Wessendorf

Art Unit

1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1639

**DETAILED ACTION**

***Status of Claims***

Claims 1-20 are pending and under examination.

***Specification***

The objection to the specification has been withdrawn in view of the amendments to the specification.

***Claim Rejections - 35 USC § 112, first paragraph***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for reasons set forth in the last Office action.

***Response to Arguments***

Applicants argue that claims 10-13 have been amended to recite that at least one array element also includes an oligo,

Art Unit: 1639

mRNA, DNA or oligo respectively. In reply, the amendments to the claims have not overcome the rejection, as this is the same reason of the last rejection. That is, the specification fails to describe an array with the different elements contained therein. Claim 1 recites a protein-protein reaction between protein components. It does not recite a protein-mRNA, protein - sugar and the other recited elements interaction. This is evident from applicants' succeeding arguments where only arrays with protein-protein interactions were discussed. The other elements are given only a passing remark.

***Claim Rejections - 35 USC § 112, second paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for reasons advanced in the last Office action under the paragraphs as they appeared in the last action.

***Response to Arguments***

1. Applicants argue that no essential step is omitted. In response, the omitted step is in the determination of the

Art Unit: 1639

protein-protein interaction or how the array is made such that interaction is accomplished and the non-interacting elements are removed from the substrate array.

Claim 1, as amended, recites the Markush language "consisting essentially of". This is still an improper Markush language. The Markush language is "consisting of".

2. Applicants submit with regards to claim 3 that it includes a further limitation of the claimed to one of many possible uses of the array prepared by the method. In response, this is a broadening claim. It is unclear whether a method of use or method of making is being claimed. The method of using and making are two different statutory subject matter requiring different steps. Therefore, claim 3 is a broadening claim. Also, there is no recitation in the base claim of a physiological condition.

3. The rejection of claim 13 is withdrawn in view of the amendment to this claim.

4. Claims 10-23 and 17-20 are confusing and unclear as to whether each of these compounds form a part of the protein molecule or are separate, discrete components of the protein array. The specification fails to positively teach or show as to how such array are prepared with these different compounds.

Art Unit: 1639

Since applicants have not responded to this rejection, it is believed that applicants are acquiescing therewith.

5. The term "corresponding" PDZ domain, within the claimed context, is indefinite as in what manner or what constitutes a corresponding PDZ domain. [Claim 14]. Applicants have not responded to this rejection, hence, it is believed they are acquiescing therewith.

6. The rejection in claim 16 is withdrawn in view of the amendment to said claim 16.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle (Cell) in view of any one of applicant's disclosure of known prior art or Schneider-Mergener (Comparative and Functional Genomics) (hereinafter Schneider) or Harris et al (Jrnl. of Cell Science) for reasons set forth in the last Office action.

***Response to Arguments***

Applicants admit that the Schneider reference relates to synthetic peptide and protein domain arrays prepared by applying SPOT technology for parallel synthesis of peptide. But argue that Schneider fails to disclose or suggest the benefits of protein-protein interaction between the first and second proteins. Doyle is argued not to suggest the motivation for combining the teaching with Schneider or Harris without the claimed invention as a roadmap in hindsight.

In response, the examiner's conclusion of obviousness is not based upon hindsight with the claimed invention as a roadmap. Doyle positively discloses the PDZ protein interaction with protein containing S/T-X-V/I/L (as claimed), except Doyle does not disclose said interactions in an array. However, the PDZ protein made in an array is disclosed either by Schneider or Harris. Schneider discloses said PDZ array and PDZ is known in the art to bind to its protein with a carboxyl containing e.g., SLV as taught by Doyle or Harris (page 3220, Table 1). Since an array of PDZ has been made by Schneider, it is expected and known that said PDZ would react with its known binding partner, as the SLV carboxyl containing protein. It would have been obvious to make an array containing a known protein as PDZ that interacts with its known binding partner. The motivation to

Art Unit: 1639

make an array of known components is provided by Schneider reciting numerous advantages of the array. Also, because as recognized by applicants in the instant REMARKS that as initially thought of said disulfide bond geometry, "...Harris states that PDZ domains can be used in combination to bind an array of target proteins or to oligomerize into branched networks..." (page 12, second paragraph of the instant REMARKS).

There is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosure taken as a whole would suggest to one of ordinary skill in the art. In re Simon 174 USPQ 114 (CCPA 1972); In re McLaughlin, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA 1969).

No claim is allowed.

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS



Art Unit: 1639

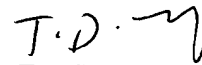
of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. D. Wessendorf whose telephone number is (703) 308-3967. The examiner can normally be reached on Flexitime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (703) 306-3217. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7924 for regular communications and (703) 308-7924 for After Final communications.

Art Unit: 1639

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

  
T. D. Wessendorf  
Primary Examiner  
Art Unit 1639

Tdw

May 29, 2003